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Fig.1

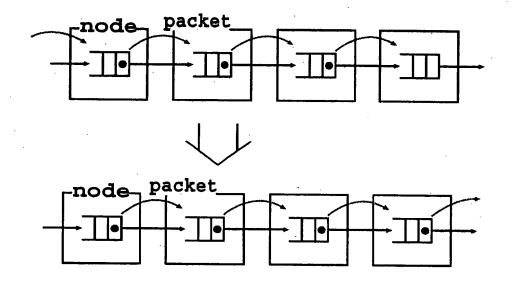


Fig.2

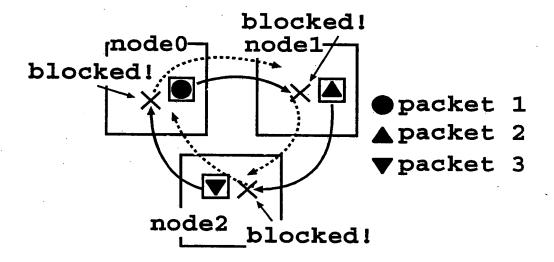


Fig.3

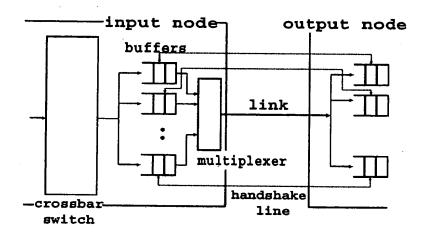


Fig.4

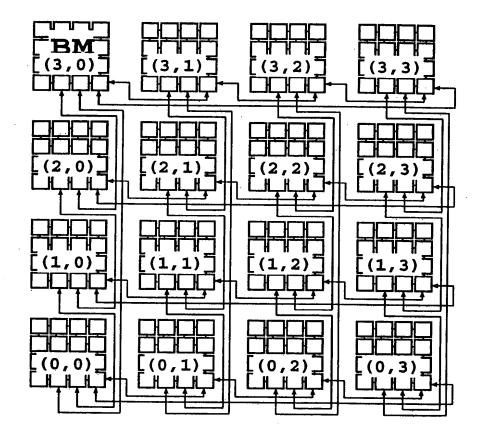
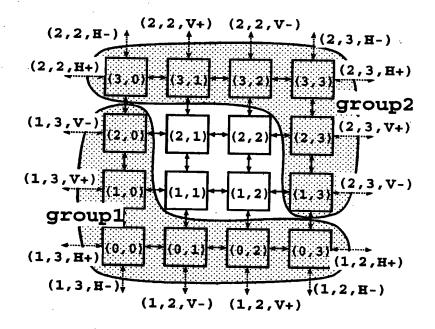


Fig.5



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Routing Algorithm for a Level-L TESH:
Routing(s,d);
\texttt{source}; \texttt{s=} \{ \texttt{s}_{2L-1}, \texttt{s}_{2L-2}, \dots, \texttt{s}_0 \}; \quad \texttt{destination}; \texttt{d=} \{ \texttt{d}_{2L-1}, \texttt{d}_{2L-2}, \dots, \texttt{d}_0 \};
tag; t_{2L-1}, t_{2L-2}, \ldots, t_0; group; g;
  for i = 2L-1:2;

if (d_i-s_i+2^m) \mod 2^m \le 2^m/2 then
     routedir = plus; ti = (di-si+2^m) \mod 2^m;
else routedir = minus; t<sub>i</sub> = 2^m- (di-si+2^m) \mod 2^m; endif;
     g = get_group_number(s,d,routedir);
     while (t_i!=0) do
       if i is even number then
                 outlet_nodex= outlet_x(g,i/2+1,H,routedir);
                 outlet_nodey= outlet_y(g,i/2+1,H,routedir);endif;
       if i is odd number then
                 outlet_nodex = outlet_x(g,i/2+1,V,routedir);
                 outlet_nodey = outlet_y(g,i/2+1,V,routedir);endif;
       BM_routing(outlet_nodex, outlet_nodey);
       if routedir = plus then send packet to next BM;
                            send packet to previous BM; endif; }(b)
       t_i = t_i - 1;
     endwhile;
  endfor:
     BM_routing(d_1,d_0);
end.
BM_routing(dx, dy);
source; sx, sy; destination; dx, dy;
tag; tx, ty;
  t_x = d_x - s_x;
  t_y = d_y - s_y;
  while (t_y! = 0) do
    if t_y > 0 then move packet to upper node; t_y = t_y - 1; endif; .
     if ty < 0 then move packet to lower node; ty = ty + 1; endif;
  endwhile;
  while (t_x!=0) do
    if t_x > 0 move packet to right node; t_x = t_x - 1; endif;
     if t_x < 0 move packet to left node; t_x = t_x + 1; endif;
  endwhile;
end.
```

Fig.7

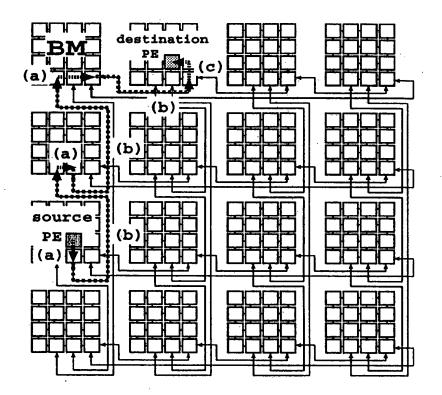


Fig.8

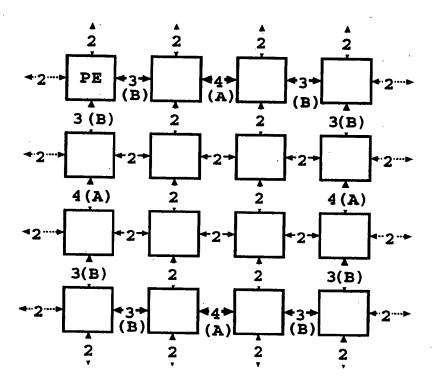


Fig.9

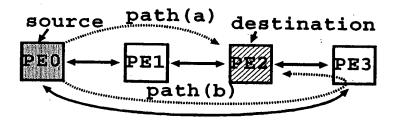


Fig. 10

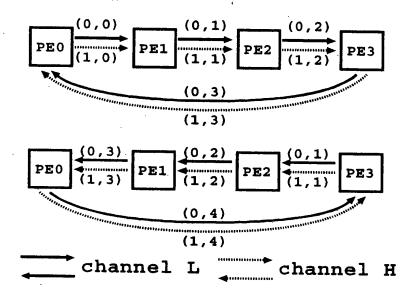


Fig.11

